

FACTSHEET

Plant Protection & Quarantine

United States
Department of
Agriculture

Animal and
Plant Health
Inspection
Service

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Boll Weevil Eradication

Q. What is the Southeastern Boll Weevil Eradication Program?

- A.** This program is a cooperative effort in which State and Federal officials work with cotton growers to eradicate the boll weevil incrementally from the Southeastern United States. Since 1892, the boll weevil (*Anthonomus grandis Boheman*) has plagued U.S. cotton farmers. Boll weevil eradication began with a successful trial program in North Carolina and Virginia in 1978. Since then, this program has expanded to include cotton growers in South Carolina, Georgia, Florida, and parts of Alabama. Now, cotton producers in northern Alabama, central Tennessee, and northeastern Mississippi have an opportunity to eliminate this pest.

A similar program has been completed in California, Arizona, and adjacent areas of Mexico. In addition, growers in central Texas have also passed a referendum to begin a program in the fall of 1994.

Q. How does the program work?

- A.** Authorization to operate a program is established through State legislation and grower-approved referenda. Each State has a boll weevil eradication foundation with cotton-producer members either elected or appointed and State agricultural officials. The foundation works with Federal officials to run the program. Initially, in each new area, program managers implement an eradication phase to eliminate all boll weevils and then a posteradication phase to prevent reinfestation.

Q. Where are current program activities?

- A.** The program is currently completing eradication operations in Georgia, Florida, and southern Alabama. Virginia, North Carolina, and South Carolina are in a posteradication program.

Q. How is the boll weevil eradicated?

- A.** Three main techniques—pheromone traps, chemical treatments, and cultural practices—are employed over a 2 1/2-year period. In sensitive areas, these techniques are supplemented with alternate control technology intended to minimize the use of pesticides. Spray operations begin about a month after trapping. Continued trapping pinpoints areas of infestation and triggers necessary treatments until all weevils are gone. This takes about 2 1/2 years.

Q. What chemicals are used?

- A.** Malathion is the primary pesticide used in the program. It is applied at an ultra-low-volume rate of 16 oz per acre from aircraft or in a ready-to-use formula (Cythion) from ground sprayers. Dimilin, an insect growth regulator, may be used around certain sensitive areas as a means of reducing the number of pesticide applications.

Q. How many chemical treatments does the program apply in each area?

- A.** The program applies insecticides only on fields where infestations are detected and spray criteria are met. During late summer 1994, traps will be placed and checked to assess the extent of infestation in the new program area. Fields determined to be infested will generally receive an average of seven applications this fall. Alternative control technology around sensitive areas such as schools, hospitals, and housing developments is proposed to reduce the amount of spraying. Based on trapping surveys, the number of fields requiring pesticide application in 1995 and 1996 will likely continue to go down. Initial program spraying does not begin until cotton growth slows in late summer. In subsequent seasons, treatments are applied where needed during the prebloom or squaring stage of cotton growth.

Q. How are aerial applicators hired?

- A. The Southeastern Boll Weevil Eradication Foundation, Inc., consisting of cotton representatives from North and South Carolina, Virginia, Alabama, Georgia, Florida, Mississippi, and Tennessee, solicits bids for aerial application of pesticides. Bids are reviewed by program management, and contracts are awarded by the Foundation on a competitive basis. All applicators must meet State requirements for certification.

Q. Who is involved in carrying out the Southeastern Boll Weevil Eradication Program?

- A. The U.S. Department of Agriculture's (USDA) Animal and Plant Health Inspection Service (APHIS) oversees program operations, including mapping, trapping, and spraying. The Southeastern Boll Weevil Eradication Foundation, Inc., provides overall coordination and assistance on policy involving the multi-State area. The State departments of agriculture handle regulatory functions in their respective States. USDA's Extension Service helps familiarize growers with the program and provides other valuable information regarding crop production.

Q. What is required to expand the program into new areas?

- A. Expansion of the program requires cotton producers within the area of proposed expansion to pass a referendum with at least a two-thirds' majority. Once a referendum passes, participation becomes mandatory according to State legislation.

Q. How do growers benefit from participating in the program?

- A. Growers benefit by eliminating all related costs of controlling the boll weevil. Once this pest is eradicated from an area, growers typically experience an increase in cotton yield of up to 10 percent. Moreover, resurgence of beneficial insects preying on other cotton pests further reduces the need for pesticides, resulting in additional cost savings.

Q. Is the program beneficial to the general public?

- A. As cotton becomes more profitable, cotton producers are able to spend greater amounts in the local community for equipment, goods, and services. Economic studies have shown that, after the program is completed in an area, land value tends to increase. The most significant benefit, however, is the reduction of pesticides introduced into the environment. After the boll weevil is eradicated from an area, farmers generally reduce pesticide use by 40 to 90 percent.

Q. How long will it take to complete the program?

- A. During 1995 and 1996, it is expected that the number of infested fields will diminish to the point where virtually no spraying will be needed in 1997, with most of the areas entering a posteradication phase.

Q. How are the program costs financed?

- A. The Southeastern Boll Weevil Eradication Program is a cooperative effort in funding as well as in operation. Growers pay 70 percent of the operational costs, while APHIS pays 30 percent. Program costs to the grower are currently estimated to be \$98 per acre, per year, spread over a 5-year period. In some instances, grower costs may be reduced by State appropriations to offset acreage assessments.

Q. What measures are taken to prevent reinfestation?

- A. Seed cotton, gin trash, and used cotton-harvesting equipment are inspected, treated if necessary, and certified "pest free" before being moved into a program area. These measures are designed to keep boll weevils from being transported into an area being cleared of the pests. In addition, the planting of noncommercial (ornamental or experimental) cotton is restricted while the program is in progress. During the posteradication phase, trapping continues on cottonfields to detect any reinfestation. Localized treatments are applied if reinfestation occurs.

Q. What are the posteradication costs?

- A. Based on projected costs in the current eradication area, a grower's annual costs for posteradication will likely be \$5 to \$10 per acre initially and then level out to about \$3.50 per acre.

Q. How will the eradication program affect other cotton insects?

- A. Boll weevils are considered a key pest in cotton production because the insecticides cotton producers use early in the season to control boll weevils also eliminate populations of beneficial insects. As the need for early season boll weevil sprays is eliminated, these beneficial insects can be effective in controlling other cotton pests, like bollworm and aphids. Growers in eradicated areas can now delay initial spray operations, reduce pesticide rates, use alternative pesticides, or lengthen the intervals between sprays to reduce their operating costs while controlling remaining cotton pests.

Q. Who can answer additional questions about the program?

- A.** You may contact the Southeastern Boll Weevil Eradication Program Headquarters at (205) 223-7532 or the department of agriculture regulatory agencies in the following States: Alabama (205) 242-2656; Mississippi (601) 325-3390; and Tennessee (615) 360-0130.

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